

1Q. Which method will get executed on clicking submit button of the following code?

```
<input type="text" name="name">  
<form method="GET" action="/TestServlet"> <input type="submit"  
value="Submit"> </form>
```

Options

a.PUT

b.GET - A

c.POST

d.OPTION

2Q.Following is the code for doGet() and doPost() method of TestServlet:

```
public void doGet(HttpServletRequest req, HttpServletResponse res) {  
    try {  
        PrintWriter pw = res.getWriter();  
        pw.println("<h2> Hello World </h2>");  
    } catch (Exception e) { e.printStackTrace(); }  
}  
public void doPost (HttpServletRequest req, HttpServletResponse res) { doGet(req, res),
```

Which one of the following statement is correct?

Options

1.This will only work for HTTP GET requests.

2.This will only work for HTTP POST requests

3. This will work for HTTP GET as well as POST requests - A

4. It will throw an exception at runtime, as you cannot call doGet() from doPost().

5.It'll throw an exception at runtime only if a POST request is sent to it

3Q.Which of the following is the factory class that is used to get the Session

objects? 1.Hibernate ConnectionFactory

2. Hibernate SessionFactory - A

3. Hibernate Configuration

4. Hibernate Connection

5Q. _____ clause can appear only once at the end of the query containing compound SELECT statements.

1. WHERE - A

2. ORDER

3. ORDER BY

4. GROUP BY

6Q. Which operator is used to check for existence of a record?

Options

1. NOT NULL

2. AS

3. EXISTS - A

4. IN

7Q. SELECT CustomerName, Address || ' ' || City || ' ' || Country AS Address FROM Customers,

1. Alias named Address column will be created and under this Address, City and Country will be printed as combined statement

2. Alias named Address will be created for Country columns.

3. Alias named Address column will be created and under this all CustomerName, address, city, and country will be printed

4. Alias named Address will be created for Address columns - A

8Q. Which one of the following is a valid tag for configuring a listener class?

1. <contextlistener>

<listener-class>mypackage SomeListener</listener-class>

</contextlistener>

2. <listener>

<listener-class>mypackage SomeListener</listener-class>

</listener> - A

3. <context-listener>

<listener-class>mypackage SomeListener</listener-class>

</context-listener>

4. <listener>

<class>mypackage SomeListener</class>

</listener>

9Q. Which is the Type of Statement that the COMMIT command belongs

to? **1. TCL - A**

2. ODDL

3. DML

4. DCL

10Q. Select the property name to be set in the Hibernate configuration file to make Hibernate create the database table.

1. hibernate hbm2ddl.auto - A

2. hibernate.createtables.auto

3. hibernate.createtables

4. hibernate.hbm2ddl

11Q. Which one of the following is a correct way to pass a parameter equivalent to the query string user-rani at request time to an included component?

1. <jsp include page="other.jsp"> <isp param paramName="user" paramValue="rani" /> </jsp include>

2. <jsp include page="other.jsp"> <jsp param name="rani" value="user" /> </jsp include>

3. `<jsp include page="other.jsp"> <jsp param name="user" value="rani" >> </jsp include>` -

A

4. `<jsp include page="other.jsp"> <jsp param param="user" value="rani"/></jsp include>`

12Q. How do we inject into a field a bean by its name?

1. By using `@Configuration` annotation.

2. By using only `@Qualifier` annotation. - A

3. By using both the `@Autowired` and the `@Qualifier` spring annotations.

4. using the `@Autowired` annotation and naming the field with the bean name.

13Q. View the following SQL statement

TRUNCATE TABLE emp

which of the following about the execution of this statement is true?

1. All rows will be removed from the EMP table, as well as any related rows that are part of a referential integrity constraint

2. All rows will be removed from the EMP table and will require a ROLLBACK statement to recover them.

3. All rows will be removed from the EMP table and the table will be dropped

4. All rows will be removed from the EMP table, but the table structure will remain intact. -

A

14Q. Which are the modules of the core container?

1. Beans, Core, Context, SpEL - A

2. Core, Context, ORM, Web

3. Core, Context, Aspects, Test

4. Bean, Core, Context. Test

15Q. To which is the code below equivalent to?

```

package com.foo,

@Configuration

public class AcmeConfig {
    @Bean

    public AcmeService acmeService() {

        return new AcmeServiceImpl().

    }

}

```

1.<beans>

```
<bean id="acmeConfig" class="com AcmeService"/> </beans>
```

2.<beans>

```
<bean id="acmeService" class="com.foo.Acme ServiceImpl"/>
```

```
</beans>
```

3.<beans>

```
<bean id="acmeConfig" class="AcmeServiceImpl"/>
```

```
</beans>
```

4.<beans>

```
<bean id="acmeConfig" className="com foo AcmeServiceImpl"/>
```

```
</beans>
```

16Q. What statement best characterizes the Single Table strategy?

1. Is a mapping inheritance strategy.

2.Subclasses do not need to be pointed to the common table

3.Captures partial elements of the class hierarchy

4.Contains all the columns for a few subclasses

17Q. Given a JSP page that is requested with the query string: ?username=yogesh Which one of the following lines of code will result in the output of yogesh?

1. `requestScope["username"]`

2. `requestScope.username`

3. `param.username` - A

4. `parameter username`

18Q. Which one of the following `HttpServletResponse` methods is used to redirect an HTTP request to another URL?

1. `sendURL()`

2. `redirectURL()`

3. `redirecthttp()`

4. `sendRedirect()` - A

19Q.

```
<html><body>
```

```
<%
```

```
Integer count = (Integer) request.getSession(false).getAttribute("count").
```

```
if(count == null) {
```

```
    out.println(count);
```

```
}else
```

```
    request.getSession(false).setAttribute("count", new Integer(1)),
```

```
%>
```

```
Hello!
```

```
</body></html>
```

Which one of the following will be printed for the very first request to the above page as well as the web application th

1. It will print Hello!

2. It will print Hello and will set the count attribute in the session

3. It will throw a `NullPointerException` at request time.

4. It will not compile.

20Q. element within the id element is used to generate the primary key values automatically?

1.<generator> - A

2.<key>

3.<primary-key>

4.<index>

21Q. Which one of the following represents the correct syntax for using the include directive?

1.<%@ include file="menu.jsp" %> - A

2.<jsp include page="menu.jsp" />

3.<jsp include file="menu.jsp" />

4.<jsp include path="menu.jsp"/>

22Q. Which of the following statements are not true for the Spring

framework? 1.Spring framework is a light weight framework

2.Spring framework is not open source - A

3.Spring provides Dependency Injection

4.Spring targets only Java web application development

23Q. Which of the following Servlet method is used to release the resources like database connections etc.?

1.init()

2.service()

3.destroy()

4.getServletConfig()

24. Which of the following is used to get a physical connection with the database?

1.Hibernate Session - A

2.Hibernate SessionFactory

3.Hibernate Configuration

4.Hibemate Connection

25Q. Root tag for bean configuration xml file is

1.<bean-config>

2.<app-config>

3.<beans> - A

4.<bean-def>

26Q. SELECT TO_CHAR (TO_DATE('24#12#15','DD/MM/YY'), 'DD/MM/YY') FROM DUAL;

What will be the result of executing this statement?

1. The statement will produce an error message because the punctuation characters in the string do not match those used in the fo

2. The statement will execute successfully and produce a character value in the format DD/MM/YY

3. The statement will produce an error message because a TO_CHAR and TO_DATE cannot be used in the same statement

4. The statement will produce an error message because the FX format modifier is not used in the format model.

30Q.

```
<html>
```

```
<body>
```

```
<% int x=5; %>
```

```
<%! int x=7, %>
```

```
x = <%=x%>, <%=this.x%>
```

```
</body>
```

```
</html>
```

Which one of the following will be the correct output of the above code?

1.x=3,5

2.x=3,7

2.x=5,3

4.x=5,7

31Q. You want to display the departments that have an average monthly salary greater than \$8,000. You also want this information displayed by the department. You execute the following SQL statement:

```
FROM employees
```

```
SELECT department_id, AVG(salary) WHERE AVG(salary) > 8000 GROUP BY department_id;
```

What are the results of executing this SQL statement?

1. The statement will execute correctly and give the desired results.

2. The statement will not execute correctly because you cannot use a WHERE clause to restrict groups.

3. The statement will not execute correctly because the SUM(salary) function is required.

4. The statement will not execute correctly because the GROUP BY clause needs to precede the WHERE clause

33Q. What are the major advantages of Hibernate Framework?

1. **Performance of Hibernate is very fast.**
2. **Helps in generating database independent queries.**
3. **Provides facilities to automatically create a table.**
4. It is licensed and heavy weight..

34Q. Which one of the following is the proper way to include java.util package in your jsp page? 1. <page:import package="java.util">

2. **<%@ page import="java.util.*"%> - A**
3. <%= import java.util.*: %>
4. <%@ import class="java.util."" %>

35Q. The page directive is used to convey information about the page to JSP container Which two of the following are legal syntax of page directive?

1. <% page info test page" %>
2. **<%@ page info="test page" session="false"%>**
3. <%@ page session="true" %>
4. **<%@ page isErrorPage="errorPage.jsp" %>**

37Q. Which of the following statements are true about filters?

1. **The doFilter method is always invoked by the container, never within a programmers code**
2. A filter can be invoked either through being declared in WEB XML or explicitly within a programmers code
3. **Filters are associated with a URL via the filter-mapping tag.**
4. Filters can be initialized via the filter-init-param tag in the deployment descriptor.
5. **Filters can be initialized via the init-param tag in the deployment descriptor.**

38Q. the root element, which contains all the <class> element in the hibernate mapping file.

1.<hibernate-mapping> - A

2. <config>

3.<hibernate-config>

4.<mapping>

40Q. Choose one statement from the following that best describes the relationship between JSP and serves

1. Servlets are built on JSP semantics and all servlets are compiled to JSP pages for routine use

2. JSP and servlets are unrelated technologies O Servlets and JSP are competing technologies for handling web requests Servlets are being superseded by s

3. not useful in combination

4. JSPs are built on servlet semantics and all JSPs are compiled to servlets for natusage

41Q. Which one of the following options would initialize a stream for sending a text to a browser?

A).OutputReader out = response.getOutputStream();

B). OutputStream out = response.getOutputStream(); - A

C).PrintWriter out = response.getWriter();

D).ServletWriter out = response.getWriterStream();

E).StreamWritor out = response.getOutputStreamWriter();

42Q. Which one of the following interfaces or classes is used to retrieve the session associated with a user?

- 1.GenericServlet
- 2.ServletConfig
- 3.ServletContext
- 4.HttpServlet
- 5.HttpServletRequest**

43Q. Which of the following will enable Lazy Initialization of Spring Bean?

- 1.<bean class="com.xyz.Employee" id="employee" lazy-init="false" />
- 2.<bean class="com.xyz.Employee" id="employee" lazy-init="true"/> - A**
- 3.<bean class="com.xyz.Employee" id="employee" lazy-init="lazy" />
- 4.<bean class="com.xyz.Employee" id="employee" lazy-init="early" />

45Q. The page directive is used to convey information about the page to JSP container. Which two of the following are the legal syntax of page directive?

Options

- 1.jspinit(), jspdestory(). _jspservice(), translation, compilation, load class, create an instance
- 2.jspinit(), _jspservice(), jspdestory(), translation, compilation, load class, create an instance
- 3.translation, compilation, load class, create an instance, ispinit().
_jspservice().jspdestory()**
- 4.translation, compilation, create an instance, load class, jspinit().jspdestory(), _jspservice()

46

46Q.Consider the following code written in a servlet

```
RequestDispatcher rd = request.getRequestDispatcher("world.jsp"); rd forward(request, response);
```

Which one of the following is the JSP equivalent of the above code?

Options

- 1.<jsp forward page="world.jsp"/> - A**
- 2.<jsp action forward page="world.jsp"/>
- 3.<jsp directive forward page="world.jsp"/>

4. <%@ forward file="world.jsp"%>

47Q.

Given the following web application deployment descriptor:

```
<web-app>

<servlet>

<servlet-name>myServlet</servlet-name>

<servlet-class>MyServlet</servlet-class>

...

</servlet>

<servlet-mapping>

<servlet-name>myServlet</servlet-name>

<url-pattern>*.jsp</url-pattern>

</servlet-mapping>
```

a) servlet-mapping element should be inside servlet element

b) url-pattern can't be defined that way

c) if you make the http call: http://host/Hello.jsp the servlet container will execute MyServlet -

A d) It would work with any extension excepting .jsp, .html, .htm

e) It should be <urlpattern> tag instead of <url-pattern>

48Q. Which one of the following is correct regarding Spring's support on Java Collection types? Select all that apply.

1. We can use List by using <list/> - A

2. We can use Properties by using <properties/> - A

3. We can use Sorted Set by using <sortedSet/>

4. We can use Map by using <map/> - A

49Q. What is printed as an output on the server console when the following servlet program runs for the first time?

```
1.import java.io.IOException;
2.import java.io.PrintWriter;
3.import javax.servlet.*;
4.public class HelloGeneric extends GenericServlet {
5.public HelloGeneric()
6.{
7.super();
8.System.out.println("constructor");
9.}
10. public void init() throws ServletException {
11. super.init();
12. System.out.println("init");
13.}
14. public void init(ServletConfig arg0) throws ServletException {
15. super.init(arg0);
16. System.out.println("init with ServletConfig");
17.}
```

A..constructor init init with ServletConfig service method.

B .init with ServletConfig init service method. init with ServletConfig service method

C. A runtime exception is thrown

D. constructor init with ServletConfig init service method

50Q. What will be the output of the following JSP code snippet at run-time when it is accessed the third time?

```
<% int test = 0; %>
```

```
<% ++test; %>
```

The value of test is

<%= test %>

- 1.The value of the test variable will be 2
- 2.The value of the test variable will be 0
- 3.The value of the test variable will be 1 - A**
- 4.The variable 'test must be declared at global scope, else a run-time error will occur

51Q. Which one is true about autowiring?

- 1. Properties whose type is among the following, cannot be autowired primitives and arrays of primitives - A**
- 2.For by Type dependencies that expect a single value, where more than 1 is matched the last bean in the su
- 3.Autowiring overrides XML 'property and constructor-arg' settings
- 4.Properties whose type is String can be autowired

53Q. Which one of the following lines of code, in the doPost() method of a servlet, uses the URL rewriting approach to maintaining session

- 1.useURLRewriting():
- 2.out.println(response rewrite("Click here")).
- 3.out.println("Click here").**
- 4.out.println("<Click here");

54Q. Which of the following is correct to map the "employee" table to a class "com Employee" class?

- 1.<table name= "employee" class="com Employee">
- 2.<class id="com. Employee" table = "employee">
- 3.<mapping class="com Employee" table = "employee">
- 4.<class name= "com Employee" table = "employee">

55Q. Which one of the following is a valid tag for configuring a listener

- 1.<contextlistener>
<listener-class>mypackage SomeListener</listener-class>
</contextlistener>
- 2.<listener>
<listener-class>mypackage SomeListener</listener-class>
</listener>
- 3.<context-listener>
<listener-class>mypackage SomeListener</listener-class>
</context-listener>
- 4.<listener>
<class>mypackage SomeListener</class>
</listener>

58).You execute the given below SQL query and receive an error of a constraint violation. Which statements describe possible condition Code Editor:

```
DELETE FROM departments
```

```
WHERE department_id = 50;
```

Options

A).The department number is used as a foreign key in another table

B).ON DELETE SET NULL was not used to convert the department_id to NULL

C).The parent record in this statement doesn't contain child records

D).The statement references a child record that cannot be deleted without permission from the parent record

59)._____JSP action used for bean creation?

Options

A).jsp:useBean - A

B).jsp:setProperty

C).jsp:getProperty

D).jsp:getBean

60).Which of the following is NOT TRUE about servlet?

Options

A).Servlets are Platform Independent

B).Servlets are robust and object oriented

C).Servlets only contain business logic

D).Each request in servlet runs in separate thread – A

61).Which statement defines the Data Manipulation Language, or DML, in SQL?

Options

A).Enables you to create a table

B).Enables you to retrieve data from a database

C).Used to guarantee the integrity of data in a database

D).Executed when data is added, modified, or deleted in a database - A

62).Given the following Spring configuration file, what is required?

```
<bean class="com.example.Customer">
```

```
<property name="customerAddress" ref="address"/> </bean>
```

```
<bean class="com.example.Address"/>
```

Options

A).The first declared bean Customer is missing an id must have value as "customer"

B).The second declared bean Address is missing an id that must have value as "address" - A

C).The second declared bean Address is missing an id that must have value as "customer"

D).The first declared bean Customer is missing an id must have value as "address"

63).Which scope creates a new bean instance each time when requested?

Options

A).Singleton

B).Prototype - A

C).Request

D).Session

64)._____command manages a user's privileges in a database.

Options

A).DOL

B).DCL - A

C).DML

D).TCL

65).The_____ module provides the fundamental parts of the framework, including the IoC and Dependency Injection features.

Options

A).Core - A

B).Bean - A

C).Context

D).SpEL

66).Which JSP Action tags is used to include the content of another resource, it may be jsp, html or servlet?

Options

A).jsp:include - A

B).jsp:forward

C).jsp:plugin

D).jsp:param

67).Which tag is used to declare a method in JSP?

Options

A).Declaration Tag - A

B). Scriptlet tag

C).Expression tag

D). Comment Tag

68).Predict the output of Expression Language $\${10*10}$.

Options

A).100 - A

B).1010

C).10*10

D).error

69).What is the syntax of JSP Page directive?

Options

A).<%@ page... %> - A

B).<% page...%>

C).<!@ page...!>

D).<%# page... %>

70).Which state does the persistent object move to when the transaction is committed and the session is closed?

Options

A).permanent

B).detached - A

C).initial

D).persistent

71).Hibernate is an _____ tool.

Options

A).ORM - A

B).ETL

C).OOC

D).AI

72).What does hibernate.hbm2ddl.auto create do?

Options

A).Create tables automatically - A

B).Creates session object automatically

C).Creates Session Factory object automatically

D).Creates session & Session Factory automatically

73).Which of the following Servlet method executes each time, when you make a request to Servlet?

Options

A).init()

B).service() - A

C).destroy()

D).getServletInfo()

74).Which statement describes the use of the UNIQUE constraint when creating a table?

Options

A).Defined at the column-level when a composite UNIQUE key is required

B).Used to ensure that rows of a table in a specified column or set of columns cannot have duplicate values - A

C).Supports the input of non null values

D).Defined at the table-level only

75).The_____manages the life cycle of servlet instances.

Options

A).Web Container

B).Servlet Container - A

C).Jsp Container

D).Application Server

76).Which of the following are Servlet's lifecycle methods?

Options

A).init() - A

B).service() - A

C).destroy() - A

D).getServletinfo()

77).Identify feature of the COMMIT and ROLLBACK statements.

Options

A).when a ROLLBACK statement is issued the current transaction ends making all pending changes permanent

B).ROLLBACK ends a transaction and prompts you to save changes

C).A transaction begins when a COMMIT statement is issued

D).COMMIT and ROLLBACK help to ensure data consistency – A

78).What is javax.servlet.Servlet?

Options

A).interface - A

B).abstract class

C).concrete class

D).enum

79).Which one is the correct order of phases in JSP life cycle?

Options

A).Initialization, Cleanup, Compilation, Execution

B).Initialization, Compilation, Cleanup, Execution

C).Compilation, Initialization, Execution, Cleanup - A

D).Cleanup, Compilation, Initialization, Execution

80).What is use of below code snippet?

```
<property name="hibernate.hbm2ddl.auto">create-drop</property>
```

Options

A).The above snippet creates new table everytime

B).The above snippet overwrites existing table everytime

C).On every run, the above snippet drops and recreates the table mentioned in the hibernate configuration files

D).The above snippet modifies the table on every run

81).What does AOP stand for?

Options

A).Asset Oriented Programming

B).Any Object Programming

C).Aspect Oriented Programming

D).Aspect Oriented Protocol – A

82. The _____ element maps the unique ID attribute in class to the primary key of the database table.

1. <id> - **A**
2. <key>
3. <index>
4. <primary key>

83. What is true about @Autowired annotation?

Options

1. Applying @Autowired to a field is not legal and will result in a RuntimeException

2. @Autowired may be applied to either a field, constructor or the setter of a field - A

3. Applying @Autowired to a field is not legal and will result in a checked exception

4. @Autowired may be applied to setter methods only

84. What is the purpose of the Transient attribute?

Options

1. Marks attributes that are not needed to persist - A

2. Enables objects to remain constant

3. Flags attributes that are required to be invisible

4. Allows attributes to be reused many times

86. In _____state new objects are created in the Java program but are not associated with any Hibernate

Options

A).Transient

B).Detached

C).Persistent -

D).New

87. Which query presents a correct syntax for a WHERE clause?

Options

A).SELECT last name FROM employees
WHERE last name BETWEEN King AND Olsen,

B).SELECT last_name, hire_date FROM employees WHERE hire date
BETWEEN 01-JAN 05 AND 01-JAN-05,

**C).SELECT last_name FROM employees
WHERE last name BETWEEN 'King' AND 'Olsen',**

D).SELECT last name, salary AS Money
FROM employees
WHERE Money BETWEEN 1000 AND 2500,

E).SELECT last name, salary FROM employees
WHERE salary BETWEEN 2500 AND 1000 -

88. Which statement best describes the purpose of DML statements in SQL?

Options

A). Used to control user access to the database

B). Used to manage transaction within the database

C). Used to create and modify database objects -

D). Used to work with the actual data within the database objects

89. Which of these can be annotated on a class to indicate that the class can be used by the Spring IoC container as a source of bean definition

Options

A).@Configuration - A

B).@Bean

C).@BeanSource

D).@BeanConfiguration

90. Which one of the following statements is correct about the way a servlet can access its initialization

1. By simply calling getInitParameter from any of the servlets methods (for example doGet)

2. It must be done only by calling getServletConfig().getInitParameter.

3. It can only be done by overriding the method init(ServletConfig config) - A

4. It can be done by calling getServletContext().getInitParameter method

91. What are the various comparison operators used in the WHERE clause?

1. BETWEEN - A

2. IN

3. TO_DATE

4. EXISTS

92. Which Datatype is used to store Binary Value?

Options

(a) CLOB

(b) BLOB - A

(c) RAW

(d) LONG

93. Which property makes Hibernate generate the appropriate SQL

Options

1. hibernate dialect

2. hibernate.connection driver class

3. hibernate connection driver

4. hibernate session

94. What are the different states of a persistent object? (More than 1 option is correct)

1. Transient

2. Detached

3. Persistent

4. New

95. Which of these can use the context component scan XML element (More than 1 option is correct)

1. FileSystemXmlApplicationContext

2. AnnotationConfigWebApplicationContext

3. AnnotationConfigApplicationContext

4. ClassPathXmlApplicationContext

96. Spring is a lightweight framework for

Options

1. database ready applications

2. enterprise ready applications.

3. iow ready applications

4. web application development

97. _____ annotation is used on model classes to specify

Ans - @entity

98. Integrity constraints that restrict null values in sql

Ans – Primary, not null

99. which of the following can be used to explicitly destroy the session object?

1. you cannot .it can only be expunged automatically after session timeout expires
2. **By Calling invalidate() on session object**
3. By Calling expunge() on session object
4. By Calling delete() on session object
5. By Calling finalize() on session object

100. Which three of the following are implicit objects available to every JSP page by default? (More than 1 option is correct)

1. **Session**
2. Context
3. System
4. **Out**
5. **request**

101. What are the various Numerical Datatypes used while creating a table? (More than 1 option is correct)

1. **char**
2. **int**
3. number
4. systimestamp

102. Which one of the following is an equivalent in jsp of printWriter in servlet?

1. **jspWriter**
2. jspPrintWriter
3. jspOutputStream
4. jspBufferedStream

103. Consider the following code:

```
public void doGet(HttpServletRequest req, HttpServletResponse res){ HttpSession session =  
req.getSession(); ServletContext ctx = this.getServletContext();  
  
if(req.getParameter("userid") !=null){  
//1  
}  
}
```

You want the userid parameter to be available only to the requests that come from the same user.

Which one of the following lines would you insert at //1?

Options

A).session.setAttribute("userid", userid)

B).req.setAttribute("userid", userid);

C).ctx.setAttribute("userid", userid);

D).session.setAttribute("userid", userid);

E).this.addParameter("userid", userid);

104. Consider the following code:

<html>

<body>

<% { %>>

<jsp:useBean id="address" class="AddressBean" scope="session" />

```
<% } %>
```

```
//1
```

```
</body>
```

```
</html>
```

Which one of the following can be placed at line //1 above to print the value of the stre

Options

A). <jsp:getProperty name="address" property="street" />

B). <% out.print(address.getStreet()); %>

C). <%= address.getStreet() %>

D).<%=

<%= address.getStreet() %>

((AddressBean)session.getAttribute("address")).getStreet() %>

E).<%= session.getStreet() %>

107. What are the different types of Autowiring in Spring?

Options

A).byName, by Type, destructor and autodetect

B).byName, byMethod, constructor and autodetect

C).byName, byType, constructor and autocorrect

D).byName, by Type, and constructor – A

108. What is prototype scope?

Options

A).This scopes a single bean definition to have any number of object instances. - A

B).This scopes the bean definition to a single instance per HTTP Request.

C).This scopes the bean definition to a single instance per HTTP Session.

D).This scopes the bean definition to a single instance per HTTP Application/ Global session.

109. What are the different logical operators used in SQL?

Options

A).AND

B).OR

C).NOT

D).NOT NULL

Q.110) Which of the following JSP tags can be used to include the output of another JSP page into the output of the current page at request time? (Select one)

a. <jsp:insert>

b. <jsp:include>

c. <jsp:directive.include>

d. <jsp:directive:include>

e. <%@ include %>

Answer: b

Q.111) Consider the contents of the following two JSP files: File 1: test1.jsp

```
<html><body>
    <%      String      message      =      "Hello";      %>
           //1      Insert      LOC      here.
    The      message      is      <%=      message      %>
</body></html>
```

File

2:

test2.jsp

```
<% message = message + " world!"; %>
```

Which of the following lines can be inserted at //1 in test1.jsp so that it prints "The message is Hello world!" when requested? (Select one)

- a <%@ include page="test2.jsp" %>
- b <%@ include file="test2.jsp" />
- c <jsp:include page="test2.jsp" />
- d <jsp:include file="test2.jsp" />

Answer: b

Q.112) Which of the following is a correct way to pass a parameter equivalent to the query string user=mary at request time to an included component? (Select one)

- a. <jsp:include page="other.jsp" >
 <jsp:param paramName="user" paramValue="mary" />
 </jsp:include>
- b. <jsp:include page="other.jsp" >
 <jsp:param name="mary" value="user" />
 </jsp:include>
- c. <jsp:include page="other.jsp" >
 <jsp:param value="mary" name="user" />
 </jsp:include>
- d. <jsp:include page="other.jsp" >
 <jsp:param param="user" value="mary"/>
 </jsp:include>

e. `<jsp:include page="other.jsp" >`
`<jsp:param user="mary" />`
`</jsp:include>`

Answer: c

Q.113) Identify the JSP equivalent of the following code written in a servlet. (Select one)

```
RequestDispatcher rd = request.getRequestDispatcher("world.jsp");  
rd.forward(request, response);
```

- a. `<jsp:forward page="world.jsp"/>`
- b. `<jsp:action.forward page="world.jsp"/>`
- c. `<jsp:directive.forward page="world.jsp"/>`
- d. `<%@ forward file="world.jsp"%>`
- e. `<%@ forward page="world.jsp"%>`

Answer: a

Q.114) Consider the contents of two JSP files:
File 1: test1.jsp

```
<html><body>  
    <% pageContext.setAttribute("ninetyNine", new Integer(99)); %>  
    //1  
</body></html>
```

File 2: test2.jsp

The number is `<%= pageContext.getAttribute("ninetyNine") %>`

Which of the following, when placed at line //1 in the test1.jsp file, will allow the test2.jsp file to print the value of the attribute when test1.jsp is requested? (Select one)

- a. `<jsp:include page="test2.jsp" />`
- b. `<jsp:forward page="test2.jsp" />`
- c. `<%@ include file="test2.jsp" %>`
- d. None of the above because objects placed in pageContext have the page scope and cannot be shared with other components.

Answer: c

Q.115) Consider the contents of two JSP files:
File 1: this.jsp

```
<html><body><pre>
                <jsp:include page="that.jsp"      >
                <jsp:param  name="color"    value="red"    />
                <jsp:param  name="color"    value="green"  />
                </jsp:include>
</pre></body></html>
```

File 2: that.jsp

```
<%
    String colors[] = request.getParameterValues("color");
    for (int i=0; i<colors.length; i++) {
        out.print(colors[i] + " ");
    }
%>
```

What will be the output of accessing the this.jsp file via the following URL? (Select one)

<http://localhost:8080/chapter12/this.jsp?color=blue>

- a. blue
- b. red green
- c. red green blue
- d. blue red green
- e. blue green red

Answer: c

Q.116) Consider the contents of two JSP files:
File 1: this.jsp

```
<html><body>
    <%= request.getParameter("color") %>
    <jsp:include page="that.jsp" >
    <jsp:param name="color" value="red" />
    </jsp:include><%= request.getParameter("color") %>
</body></html>
```

File 2: that.jsp
<%= request.getParameter("color") %>

What will be the output of accessing the this.jsp file via the following URL? (Select one)
<http://localhost:8080/chapter12/this.jsp?color=blue>

- | | | |
|------------------|------|------|
| a. blue | red | blue |
| b. blue | red | red |
| c. blue | blue | red |
| d. blue red null | | |

Answer: a

Q.117) Consider the contents of three JSP files:
File 1: one.jsp

```
<html><body><pre>
    <jsp:include page="two.jsp" >
    <jsp:param name="color" value="red" />
    </jsp:include>
</pre></body></html>
```

File 2: two.jsp

```
<jsp:include page="three.jsp" >
    <jsp:param name="color" value="green" />
</jsp:include>
```

File 3: three.jsp

```
<%= request.getParameter("color") %>
```

What will be the output of accessing the one.jsp file via the following URL? (Select one)

<http://localhost:8080/chapter12/one.jsp?color=blue>

- a. red
- b. green
- c. blue
- d. The answer cannot be determined.

Answer: b

ADVANCE JAVA- SERVLET

1. Which one of the following HTTP methods is commonly used to test the validity of a hyperlink when you do not want (or need) to actually retrieve the content of the link, as the latest version is already available?

- a) CHECK
- b) TEST
- c) PUT
- d) GET
- e) HEAD**

2. Which one of the following methods will be invoked when a ServletContext is destroyed?

- a) contextDestroyed() of javax.servlet.ServletContextListener**
- b) contextDestroyed() of javax.servlet.HttpServletContextListener
- c) destroy() of javax.servlet.GenericServlet
- d) contextDestroyed() of javax.servlet.http.HttpServletContextListener
- e) contextDestroyed() of javax.servlet.http.HttpSessionListener

3. Consider the following class:

```
import javax.servlet.*;  
public class MyListener implements ServletContextAttributeListener  
{
```

```
public void attributeAdded(ServletContextAttributeEvent scab)
{
    System.out.println("attribute added");
}
public void attributeRemoved(ServletContextAttributeEvent scab)
{
    System.out.println("attribute removed");
}
}
```

Which one of the following statements about the above class is correct?

- a) This class will compile as it is.
- b) This class will compile only if the attributeReplaced() method is added to it.**
- c) This class will compile only if the attributeUpdated() method is added to it.
- d) This class will compile only if the attributeChanged() method is added to it.
- e) This class will compile only if the attributeDestroyed() method is added to it

4. Which one of the following is a requirement of a distributable web application?

- a) It cannot depend on ServletContext for sharing information**
- b) It cannot depend on the sendRedirect() method
- c) It cannot depend on the include() and forward() methods of the RequestDispatcher class
- d) It cannot depend on cookies for session management
- e) It cannot depend on html hidden form fields for session management

5. You want to write Servlet classes for a new web protocol of yours that you have developed. Which one of the classes from the following would you extend your servlets from?

a) HttpServlet

b) GenericServlet

c) Servlet

d) AbstractServlet

6.Which one of the following methods would you use to put the session id into the URL to support sessions using URL rewriting?

a) rewriteURL() of HttpServletResponse

b) rewriteURL() of HttpServlet

c) encodeURL() of HttpServletRequest

d) encodeURL() of HttpServletResponse

e) encodeURL() of HttpServlet

7.Given the following web application deployment descriptor:

```
<web-app>
  <servlet>
    <servlet-name>myServlet</servlet-name>
    <servlet-class>MyServlet</servlet-class>
    ...
  </servlet>
  <servlet-mapping>
    <servlet-name>myServlet</servlet-name>
    <url-pattern>*.jsp</url-pattern>
  </servlet-mapping>
```

a) servlet-mapping element should be inside servlet element

b) url-pattern can't be defined that way

c) if you make the http call: http://host/Hello.jsp the servlet container will execute MyServlet

d) It would work with any extension excepting jsp,html,htm

e) It should be <urlpattern> tag instead of <url-pattern>

8.Which two of the following statements are true?

a) The deployment descriptor must be well formed, i.e. every tag every tag must have a matching closing tag (or be closed with a forward slash)

b) The deployment descriptor contains information on the configuration of servlets in a web application

c) A single deployment descriptor may be used to configure multiple web applications

d) The deployment descriptor cannot contain comments

e) The deployment descriptor can be edited by the designer

9.Which one of the following statements is true?

a) A file marked as load-on-startup will be returned as the default from a request to a directory with no file component.

b) By default if a directory contains a file called welcome.jsp it will be returned from a request where no file name is specified.

c) Only a jsp file can be marked as a welcome file, not a servlet

d) A file or a jsp can be marked as a welcome file within the deployment descriptor

e) A jsp file will be placed in the source packages folder

10. Which one of the following options would initialize a stream for sending text to a browser?

- a) `OutputReader out = response.getOutputStream();`
- b) `OuputStream out = response.getOutputStream();`
- c) `PrintWriter out = response.getWriter();`**
- d) `ServletWriter out = response.getWriterStream();`
- e) `StreamWriter out = response.getOutputStreamWriter();`

11. Which one of the following is the correct way of retrieving the value of the "User-Agent" header value from the request from the service method(eg: doPost())?

- a) `String userAgent=request.getParameter("User-Agent");`
- b) `String userAgent=request.getHeader("User-Agent");`**
- c) `String userAgent=request.getRequestHeader("User-Agent");`
- d) `String userAgent=getServletContext().getInitParameter("User-Agent");`

12. Which one of the following HTTP methods is used to show the client what the server is receiving?

- a) GET
- b) TRACE**
- c) RETURN
- d) OPTIONS

13. Which one of the following is the correct way of setting the header named "CONTENT-LENGTH" in the HttpServletResponse object?

- a) response.setHeader(CONTENT-LENGTH,"numBytes");
- b) response.setHeader(1024);
- c) response.setHeader("CONTENT-LENGTH", "numBytes");**
- d) response.setHeader("CONTENT-LENGTH",1024);

14. Which one of the following servlet code fragments gets a binary stream for writing an image or other binary type to the HttpServletResponse?

- a) java.io.PrintWriter out=response.getWriter();
- b) ServletOutputStream out=response.getOutputStream();**
- c) java.io.PrintWriter out=new PrintWriter(response.getWriter());
- d) ServletOutputStream out=response.getBinaryStream();

15. Which three of the following methods are declared in HttpServletRequest as opposed to in ServletRequest?

- a) getMethod()**
- b) getHeader()**
- c) getCookies()**
- d) getInputStream()
- e) getParameterName()

16. Which one of the following is the abstract method in the HttpServlet abstract class?

- a) service()
- b) doGet()
- c) doPost()

d) No abstract methods

17. Which one of the following HttpServletResponse is used to redirect an HTTP request to another URL?

- a) sendURL()
- b) redirectURL()
- c) redirecthttp()

d) sendRedirect()

**18. Where does the response redirect happen?
Select one correct answer from the following.**

- a) On the Servlet Container
- b) On the Servlet Program
- c) On the Client**
- d) On the Deployment Descriptor

**19. Where does the request dispatch happen?
Select one correct answer from the following.**

a) On the Server

- b) On the Servlet Program
- c) On the Client
- d) On the Deployment Descriptor

**20. When is it not possible to call the sendRedirect() method of response object?
Select one correct answer from the following.**

- a) After creating a connection to the Database.
- b) After the response is already committed.**
- c) After iterating through the resultSet object
- d) After opening an I/O stream

21. Which one of the following is a valid tag for configuring a listener class?

- a) `<contextlistener>`
 `<listener-class>mypackage.SomeListener</listener-class>`
 `</contextlistener>`
- b) `<listener>`**
 `<listener-class>mypackage.SomeListener</listener-class>`
 `</listener>`
- c) `<context-listener>`
 `<listener-class>mypackage.SomeListener</listener-class>`
 `</context-listener>`
- d) `<listener>`
 `<class>mypackage.SomeListener</class>`
 `</listener>`

22. Which two of the following statements are true?

- a) The sendRedirect method can only process an absolute URL as a parameter
- b) After a sendRedirect method call, the browser will automatically return to the original URL
- c) If the sendRedirect method is called after the response has been committed, an exception will be thrown**
- d) SendRedirect is a method of the HttpServletResponse Interface**
- e) SendRedirect is a method of the HttpServletRequest class

23. Which one of the following statements is true about the Web Application DeploymentDescriptor?

- a) There cannot be leading nor trailing spaces for PCDATA within text nodes
- b) The servlet container must ensure that role-names in auth-constraint are defined in security-role element
- c) URI paths specified are assumed to be URL decoded form**
- d) Web Application DD cannot be edited by a deployer

24. Which one of the following statements is false about the method log?

- a) log is a method GenericServlet class
- b) log is a method of ServletContext interface
- c) log is an overloaded method
- d) There is a log method with the signature log(String, Throwable)
- e) There is a log method with the signature log(String ,int)**

25. Which one of the following types is returned by the ServletContext method getResource and getResourceAsStream?

- a) InputStream and String
- b) String and InputStream
- c) URL and InputStream**
- d) URL and StreamReader

26. Which two of the following are mandatory elements of the web-resource-collection element?

- a) web-resource-name**
- b) url-pattern**
- c) http-method
- d) auth-constraint
- e) description

27. Consider the following servlet code:

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class MyFirstServlet extends HttpServlet
{
    public void service(HttpServletRequest req, HttpServletResponse res) throws
ServletException, IOException
    {
        res.setContentType("text/html");
    }
}
```

```
}  
  
public void doGet(HttpServletRequest req, HttpServletResponse res) throws ServletException,  
IOException  
{  
    res.getWriter().println("This is doGet!");  
}  
  
public void doPost(HttpServletRequest req, HttpServletResponse res) throws ServletException,  
IOException  
{  
    res.getWriter().println("This is doPost!");  
}  
}
```

This servlet is executed by clicking on a submit button of a form in a web page:

```
<form action="/MyFirstServlet" method=POST>  
<input type=submit>  
</form>
```

Predict the output.

Select one answer from the following.

- a) This is doPost
- b) This is doGet
- c) "This is doPost" as well as "This is doGet"
- d) It will not print anything**
- e) "This is doGet!" is printed

28. Which two of the following methods must be implemented to create a class that implements an HttpSessionListener?

a) public void sessionCreated(HttpSessionEvent se)

b) public void sessionAdded(HttpSessionEvent se)

c) public void sessionDestroyed(HttpSessionEvent se)

d) public void sessionModified(HttpSessionEvent se)

e) Public void sessionUpdated(HttpSessionEvent se)

29. Consider the following:

```
<web-app>
  <servlet>
    .....
  </servlet>
  <listener>
    <listener-class>com.javarich.LogListener</listener-class>
  </listener>
</web-app>
```

Which one of the following will happen because of the above entry in the Deployment Descriptor(DD)?

a) Log all session information as they occur

b) Provide a Log Servlet for the entire application

c) Create a listener as defined by the com.javarich.LogListener class.

d) The webapp will not be loaded due to a parse exception of the DD

e) <Listener> must come under <servlet>tag

30. Your servlet can specify a different session timeout than the one defined in the Deployment Descriptor.

Which one of the following methods need to be called to achieve this?

- a) `HttpServlet#setSessionTimeout(int interval)`
- b) `HttpSession#setMaxInactiveInterval(int seconds)`**
- c) `HttpSession#setSessionTimeout(int interval)`
- d) `HttpSession#setMinInactiveInterval(int interval)`
- e) The timeout in deployment descriptor cannot be changed.

31. What will happen when you attempt to compile and run the following code (assuming menu.jsp is available)?

```
package com.evaluvate;
import java.io.*;
import java.net.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class ReqD extends HttpServlet {
protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
    ServletContext sc = this.getServletContext();
    RequestDispatcher dis = sc.getRequestDispatcher("menu.jsp");
    if (dis != null){
        dis.include(request, response);
    }
    PrintWriter out = response.getWriter();
    out.print("Output after menu.jsp");
}
```

}

Select one answer from the following.

- a) Compilation error, the this object is not available within doGet
- b) Compilation success and output of the contents of menu.jsp followed by "output after menu.jsp"
- c) Compilation success and output of the contents of menu.jsp only
- d) Compilation success but error at runtime**

32. Consider the following code for the init() method of a servlet:

```
public void init()
{
    Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
    // 1 Get DBURL here
    theConnection = DriverManager.getConnection(dbUrl, "admin", "admin");
}
```

Assume that servletcontext is a reference to ServletContext for this servlet.

Which two of the following LOCs "may" correctly retrieve the DBURL parameter at //1?

- a) servletcontext.getInitParameter("DBURL");**
- b) this.getParameter("DBURL");
- c) servletcontext.getParameter("DBURL");
- d) this.getContextParameter("DBURL");
- e) this.getInitParameter("DBURL");**

33. Following is the code for doGet() and doPost() method of TestServlet:

```
public void doGet(HttpServletRequest req, HttpServletResponse res)
{
    try
    {
        PrintWriter pw = res.getWriter();
        pw.println("<html><head></head><body>");
        String name = req.getParameter("name");
        String[] hobbies = req.getParameterValues("hobbies");
        pw.println("Hello, "+name+"!<br> As I understand, your hobbies are :");
        for(int i=0; i< hobbies.length; i++) pw.println("<br>" +hobbies[i]);
        pw.println("</body></html>");
    }
    catch(Exception e)
    {
        e.printStackTrace();
    }
}
public void doPost(HttpServletRequest req, HttpServletResponse res)
{
    doGet(req, res);
}
```

Which one of the following statements is correct?

- a) This will only work for HTTP GET requests
- b) This will only work for HTTP POST requests
- c) This will work for HTTP GET as well as POST requests.**
- d) It will throw an exception at runtime, as you cannot call doGet() from doPost()
- e) It'll throw an exception at runtime only if a POST request is sent to it

34. Consider the following form and servlet code:

```
<form action="printParams?param1=First" method="post">
<input type="hidden" name="param1" value="First"/>
<input type="text" name="param1" value="Second"/>
<input type="radio" name="param1" value="Third"/>
<input type="submit"/>
</form>
```

```
protected void doPost(HttpServletRequest request,HttpServletResponse response) throws
ServletException,IOException
{
response.setContentType("text/plain");
PrintWriter Out=response.getWriter();
Out.write("<html><body>");
String[] param1=request.getParameterValues("param1");
Forint i=0;i<parm1.length;i++)
{
Out.Write(param1[i]+":");
}
Out.write("</body></html>");
}
```

Assuming the user changes none of the default setting s and presses SUBMIT, what will be the servlet output in the response?

Select one answer from the following.

- a) First:Second:Third
- b) First:Second:Second

c) First:Third:Third

d) First:First:Second

e) No response-servlet will not compile

35. What is the maximum number of parameters that can be forwarded to the servlet from the following HTML form?

```
<html>
<body>
<form action="ParamServlet" method="get".
    <select name="Languages" size="3" multiple>
<option value="JAVA" selected>Java</option>
<option value="CSHARP" selected>C#</option>
<option value="C" selected>C</option>
<option value="CPLUS" selected>C++</option>
<option value="PASCAL" selected>pascal</option>
<option value="ADA" selected>Ada</option>
    </select>
    <input type="submit" name="button"/>
</form>
</body>
</html>
```

Select one answer from the following.

a) 0

b) 5

c) 6

d) 7

e) 4

36. Which one of the following circumstances can cause the `HttpServletRequest.getHeaders(String name)` method to return null?

- a) If there are no request headers present in the request for the given header name.
- b) If there are multiple headers for the given header name
- c) If the container disallows access to the header information**
- d) If there are multiple values for the given header name
- e) There is no such method on `HttpServletRequest`

37. Which three of the following are likely to be found as request header fields?

- a) Accept**
- b) WWW-Authenticate
- c) Accept-Language**
- d) From**
- e) Client-Agent

38. What will be the outcome of running the following servlet code?

```
Long date=request.getDateHeader("Host");  
response.setContentType("text/plain");  
response.getWriter().write(""+date);
```

Select one answer from the following.

- a) A formatted date is written to the response
- b) -1 is written to the response

c) IllegalArgumentException

d) NumberFormatException

e) DateFormatException

39. What will be the outcome of attempting to run the following servlet code?

```
String[] values=request.getHeaders("Joy");  
Response.setContentType("text/plain");  
Response.getWriter().write(values[0]);
```

Select one answer from the following.

a) IllegalArgumentException

b) NumberFormatException

c) Will not run: 1 compilation error.

d) Will not run:2 compilation errors.

e) Null written to the response

40.Which one of the following methods is NOT idempotent?

a) Get

b) Post

c) Trace

d) Head

e) Options

41.Which two of the following circumstances will cause a servlet instance's destroy() method to be never called?

- a) As a result of a web application closedown request
- b) When init() has not run to completion successfully**
- c) If no thread has ever executed the service() method
- d) After destroy() has already been called**
- e) During Servlet replacement

42.Consider the following deployment descriptor(web.xml)file:

```
<session-config>
<session-timeout>
30
</session-timeout>
</session-config>
```

Then, in the program code setMaxInactiveInterval(2400)(seconds) for the session object is invoked. After how long would session expire?

Select one answer from the following.

- a) 30 minutes
- b) 40 minutes**
- c) Gives illegalStateException
- d) None of the listed options

43. Which one of the following is a valid life cycle event listener interface but is NOT configured in the web.xml?

- a) HttpSessionListener
- b) SessionActivationListener
- c) HttpSessionBindingListener**
- d) ContextAttributeListener
- e) SessionAttributeListener

44. Which one of the following statements is correct?

- a) Only ServletContext interface has method getRealPath
- b) Answer 1 is incorrect because also HttpServletRequest has getRealPath method**
- c) Method getRealPath throws an IllegalArgumentException if it can't convert the argument to a local filesystem path
- d) Method getPathInfo never returns null
- e) Method getRealPath throws an IllegalStateException if it can't convert the argument to a local filesystem path

45. Consider the following code snippet:

```
package com.evaluation;  
import java.io.*;  
import java.net.*;  
import javax.servlet.*;  
import javax.servlet.http.*;
```

```

public class ReqD extends HttpServlet {
protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
    ServletContext sc = this.getServletContext();
    RequestDispatcher dis = sc.getRequestDispatcher("/menu.jsp");
    if (dis != null){
        dis.include(request, response);
    }
    PrintWriter out = response.getWriter();
    out.print("Output after menu.jsp");
}
}

```

Which one of the following will be the correct outcome when the above is executed?

a) Compilation and output of the contents of menu.jsp only

b) Compilation and output of the contents of menu.jsp followed by "Output after menu.jsp"

c) Compilation error

d) Compilation, but runtime error, the buffer has been flushed

46. Which one of the following statements is true?

a) HttpSessionActivationListener class is used to support sessions in a distributed environment

b) HttpSessionActivationListener cannot be used where a session is based on URL rewriting

c) HttpSessionActivationListener configuration uses the <session-activation> tag

d) HttpSessionActivationListener configuration uses the <session-listener> tag

47. Which one of the following methods will be invoked when a ServletContext is initialized?

a) contextInitialized() on a ServletContextListener Object.

b) contextCreated() on a ServletContextListener Object

c) contextStateChanged() on a ServletContextListener Object

d) init() on a ServletContextListener Object.

e) initialized() on a ServletContextListener Object.

48. Which two of the following statements are true?

a) Every (non distributed) web application has only one instance of ServletContext

b) Every instance of HttpServlet has only one instance of ServletContext

c) The ServletContext object is retrieved via the getServletContext method of ServletConfig

d) The ServletConfig object is retrieved via the getServletConfig method of ServletContext

49. Which two of the following can store data attributes?

a) HttpServletResponse

b) HttpSession

c) HttpServlet

d) ServletContext

e) ServletConfig

50. Which two of the following statements are true?

- a) A request attribute will be visible to all subsequent request from the same client
- b) A session attribute will, by default be visible to all subsequent requests from the same client**
- c) Attributes are stored with the data type of Object**
- d) ServletContext attributes are only visible within the same servlet.
- e) ServletCofig attributes are visible to all subsequent request for the same client

51. Consider the following code:

```
//in file UserData.java
public class UserData
{
    ...data fields and methods...
}
```

```
//In file LoginServlet.java
public class LoginServlet extends HttpServlet
{
    public void doPost(HttpServletRequest req, HttpServletResponse res)
    {
        UserData userdata = loginUser(req);
        req.getSession().setAttribute("userdata", userdata); //1
    }
}
```

The UserData object is added to the session.
You need to know, whenever it is added to the session.

Which one of the following is the right way to accomplish this?

a) Make the class UserData implement HttpSessionBindingListener

b) Make the class UserData implement HttpSessionListener

c) call some method on UserData object after //1

d) Make the class UserData implement HttpSessionAttributesListener

e) This cannot be done

52. Which one of the following is the correct way of writing the init-param for a servlet in web.xml deployment descriptor file?

a) <servlet>

```
<servlet-name>HelloGeneric</servlet-name>
<servlet-class>HelloGeneric</servlet-class>
<init-param>
  <param-name>count</param-name>
  <param-value>13</param-value>
</init-param>
```

</servlet>

```
<servlet-mapping>
  <servlet-name>HelloGeneric</servlet-name>
  <url-pattern>/HelloGeneric</url-pattern>
</servlet-mapping>
```

b) <servlet>

```
<init-param>
```

```
<param-name>count</param-name>
<param-value>13</param-value>
</init-param>
<servlet-name>HelloGeneric</servlet-name>
<servlet-class>HelloGeneric</servlet-class>
</servlet>
<servlet-mapping>
  <servlet-name>HelloGeneric</servlet-name>
  <url-pattern>/HelloGeneric</url-pattern>
</servlet-mapping>
```

c) <servlet>

```
<servlet-name>HelloGeneric</servlet-name>

<init-param>
  <param-name>count</param-name>
  <param-value>13</param-value>
</init-param>

<servlet-class>HelloGeneric</servlet-class>

</servlet>

<servlet-mapping>
  <servlet-name>HelloGeneric</servlet-name>
  <url-pattern>/HelloGeneric</url-pattern>
</servlet-mapping>
```

d) <servlet>

```
<servlet-name>HelloGeneric</servlet-name>
```

<servlet-class>HelloGeneric</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>HelloGeneric</servlet-name>

<url-pattern>/HelloGeneric</url-pattern>

<init-param>

<param-name>count</param-name>

<param-value>13</param-value>

</init-param>

</servlet-mapping>

e) <init-param>

<param-name>count</param-name>

<param-value>13</param-value>

</init-param>

<servlet>

<servlet-name>HelloGeneric</servlet-name>

<servlet-class>HelloGeneric</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>HelloGeneric</servlet-name>

<url-pattern>/HelloGeneric</url-pattern>

</servlet-mapping>

53. Which two of the following statements are correct about the HttpServletResponse's buffer?

- a) You can specify its size with the method `setBufferSize` with either a number ending with kb or the word none
- b) If you use `setBufferSize` method after any content has been written the buffer won't be changed
- c) `reset` will clear uncommitted data including headers and status line**
- d) `resetBuffer` won't clear headers nor status line**
- e) default buffer size will be 12kb

54. Which two of the following statements are correct?

- a) `HttpServlet.init()` throws `ServletException`**
- b) `HttpServlet.service()` throws `ServletException` and `IOException`**
- c) `HttpServlet.destroy()` throws `ServletException`
- d) `HttpServlet.doHead()` throws `ServletException`
- e) `HttpServlet.doPut()` throws `IOException`

55. Which one of the following statements is correct about the way a servlet can access its initialization parameters?

- a) By simply calling `getInitParameter` from any of the servlets methods (for example `doGet`)**
- b) It must be done only by calling `getServletConfig().getInitParameter`
- c) It can only be done by overriding the method `init(ServletConfig config)`
- d) It can be done by calling `getServletContext().getInitParameter` method

56. Assume that the following servlet mapping is defined in the deployment descriptor of a web application:

```
<servlet-mapping>  
<servlet-name>TestServlet</servlet-name>  
<url-pattern>*.jsp</url-pattern>  
</servlet-mapping>
```

Which one of the following requests will NOT be serviced by TestServlet?

- a) /hello.jsp
- b) /gui/hello.jsp
- c) /gui/hello.jsp/bye.jsp
- d) /gui/jsp**
- e) /gui/*.jsp

57. Your servlet class depends on a utility class named com.abc.TaxUtil. Where would you keep the TaxUtil.class file? Select one answer from the following.

- a) WEB-INF
- b) WEB-INF/classes
- c) WEB-INF/lib
- d) WEB-INF/jars
- e) WEB-INF/classes/com/abc**

58. Consider the following code for the doGet() method:

```
public void doGet(HttpServletRequest req,
HttpServletResponse res)
{
    PrintWriter out = res.getWriter();
    out.println("<html><body>Hello</body></html>");
    //1
    if(req.getParameter("name") == null)
    {
        res.sendError(HttpServletResponse.SC_UNAUTHORIZED);
    }
}
```

Which one of the following lines can be inserted at //1 so that the above code does NOT throw any exception?

a) if (! res.isSent())

b) if (! res.isCommitted())

c) if (! res.isDone())

d) if (! res.isFlushed())

e) if (! res.flush())

59. What is printed as output on the server console when the following servlet program runs for the first time?

```
1.import java.io.IOException;
2.import java.io.PrintWriter;
3.mport javax.servlet.*;
4.public class HelloGeneric extends GenericServlet {
5.public HelloGeneric() {
```

```
6.super();
7.System.out.println("constructor ");
8.}
9.public void init() throws ServletException {
10. super.init();
11. System.out.println("init ");
12.}
13.public void init(ServletConfig arg0) throws ServletException {
14.super.init(arg0);
15.System.out.println("init with ServletConfig ");
16.}
17.public void service(ServletRequest request, ServletResponse response) throws
ServletException, IOException {
18.System.out.println("service method ");
19.}
20.}
```

Select one answer from the following.

a) constructor init init with ServletConfig service method

- b) init with ServletConfig init service method
- c) init with ServletConfig service method
- d) A runtime exception is thrown.
- e) constructor init with ServletConfig init service method

60. Consider the following code:

```
public void doGet(HttpServletRequest req,
HttpServletRequest res)
{
HttpSession session = req.getSession();
```

```
ServletContext ctx = this.getServletContext();
if(req.getParameter("userid") != null)
{
String userid = req.getParameter("userid");
//1
}
}
```

You want the userid parameter to be available only to the requests that come from the same user.

Which one of the following lines would you insert at //1?

a) session.setAttribute("userid", userid);

b) req.setAttribute("userid", userid);

c) ctx.setAttribute("userid", userid);

d) session.setAttribute("userid", userid);

e) this.addParameter("userid", userid);

61. Consider the following deployment descriptor for a servlet :

```
<servlet-mapping>
<servlet-name>goldie</servlet-name>
<url-pattern>*.g</url-pattern>
</servlet-mapping>
```

Which two of the following requests will be serviced by the servlet named 'goldie'?

a) http://abcinc.com/g

b) http://abcinc.com/goldie/temp.g

c) <http://abcinc.com/servlet/goldie/temp>

d) <http://abcinc.com/a/b/c/temp.g>

e) <http://abcinc.com/goldie/empt.g>

**62. What are the implications of using the HTTP GET method for a form submission?
Select three answers from the following.**

a) You cannot pass binary data to the server.

b) You cannot send unlimited (or a lot of) data to the server

c) You cannot send multiple values for one parameter to the server.

d) You can only reply with the HEADER information in the response.

e) The parameters will be appended to the URL as a query string.

63. Consider the following HTML page code:

```
<html><body>  
<a href="/servlet/HelloServlet">POST</a>  
</body></html>
```

Which one of the following methods of HelloServlet will be invoked when the hyperlink displayed by the above page is clicked?

a) doGet

b) doPost

c) doForm

d) doHref

e) serviceGet

64. Which one of the following lines would initialize the out variable for sending a Microsoft Word file to the browser?

- a) `PrintWriter out = response.getOutputStream();`
- b) `PrintWriter out = response.getWriter();`
- c) `OutputStream out = response.getWriter();`
- d) `PrintWriter out = response.getOutputStream();`
- e) `OutputStream out = response.getOutputStream();`**

65. Which two of the following methods would you use to retrieve header values from a request?

- a) `getHeader()` of `ServletRequest`
- b) `getHeaderValue()` of `ServletRequest`
- c) `getHeader()` of `HttpServletRequest`**
- d) `getHeaders()` of `ServletRequest`
- e) `getHeaders()` of `HttpServletRequest`**

66. Assuming that the Servlet Container has just called the `destroy()` method of a servlet instance, which two of the following statements are correct?

- a) Any resources that this servlet might hold have been released.
- b) The servlet container time out has exceeded for this servlet instance.
- c) The `init()` method has been called on this instance.**
- d) None of the requests can EVER be serviced by this instance.**

e) All threads created by this servlet are done.

67. Which two of the following statements are true?

a) The init method is called each time a Servlet service method runs

b) The init method is called by the container when it is placed into service

c) The init method cannot be overridden because it is marked as final

d) When a container shuts down it will call the undeploy method of running Servlets

e) When a container shuts down it will call the destroy method of running Servlets

68. Which one of the following statements is true? (given that webapp is the root of the web application)

a) The deployment descriptor must reside in the webapp\ directory

b) The deployment descriptor must reside in the webapp\deploy directory

c) The deployment descriptor must reside in the webapp\CONFIG directory

d) The deployment descriptor must reside in the webapp\WEB-INF\ directory

69. Which two of the following statements are true?

a) To be able to directly access a servlet the servlet-name must have a matching servlet-mapping

b) The init-param tag may contain java code between its opening and closing brackets

c) The welcome-file tag can mark a servlet as the default item that is returned from a url

d) The welcome-file tag must point to a servlet called welcome

e) The error-page tag must point to an html or JSP page, not a servlet.

70. You have configured your web application deployment descriptor to make some initialization parameters available to every servlet.

Which one of the following will retrieve those parameters?

a) The getInitParameter method of ApplicationContext

b) The getInitParameter method of ServletContext

c) The getConfigParameter method of ServletContext

d) The getServletInitParam method of ServletContext

e) The getAttribute method of ServletContext

71. The users of your web application do not accept cookies.

Which one of the following statements is correct?

a) You cannot maintain client state

b) URLs displayed by static HTML pages may not work properly

c) You cannot use URL rewriting

d) You cannot set session timeout explicitly

72. Which two of the following statements are true?

a) New users can be added to a container using the addNewUser method.

b) New users can be added to a container using the addUser method

c) User and role configuration is not part of the Servlet/JSP specification

d) An empty auth-constraint tag means no users will be able to access a resource

e) An empty auth-constraint tag means all users will be able to access a resource

73. Given the code of doGet() method of a servlet as follows:

```
public void doGet(HttpServletRequest req, HttpServletResponse res)  
throws ServletException, IOException
```

```
{
```

```
    String userId = loginUser(req); //this method takes the credentials  
        from the request and logs in the user.
```

```
    if(userId == null)
```

```
    {
```

```
        // 1 Should send SC_FORBIDDEN
```

```
    }
```

```
    else
```

```
    {
```

```
        PrintWriter out = response.getWriter();
```

```
        generateAndPublishData(out); //this method writes appropriate data to out.
```

```
    }
```

}

The data should be sent to the client only if loginUser() returns a non null userid, otherwise a status of SC_FORBIDDEN should be sent.

What can be placed at //1 to fulfill this requirement?

Select three answers from the following.

- a) req.getRequestDispatcher("errorpage.jsp").dispatch(req, res, HttpServletResponse.SC_FORBIDDEN)
- b) throw new ServletException(HttpServletResponse.SC_FORBIDDEN)
- c) res.setStatus(HttpServletResponse.SC_FORBIDDEN)**
- d) res.sendError(HttpServletResponse.SC_FORBIDDEN, "You are not authorized.")**
- e) res.sendError(HttpServletResponse.SC_FORBIDDEN)**

74. Which two of the following are sensible ways of sending an error page to the client in case of a business exception that extends from java.lang.Exception?

- a) Catch the exception and use RequestDispatcher to forward the request to the error page**
- b) Do not catch the exception and define the 'exception to error-page' mapping in web.xml
- c) Catch the exception, wrap it into ServletException and define the 'business exception to error-page' mapping in web.xml**
- d) Catch the exception, wrap it into ServletException, and define the 'ServletException to error-page' mapping in web.xml
- e) Do not do anything, the servlet container will automatically send a default error page.

**75. Identify correct statements about session management from the list below.
(Select two answers)**

- a) Session management is usually dependent on a hidden form field called JSessionId
- b) The unique identifier for a session may be passed back and forward through a name/value pair in the URL. The name is jsessionid.**
- c) If a cookie used for default session management, there is some flexibility with the name used for the cookie.
- d) The cookie used for default session management must be added to the response using the `HttpServletResponse.addCookie(Cookie thecookie)` method
- e) The rules for rewriting URLs for links may be different from those for rewriting URLs for redirection.**

76. What are the possible outcome from executing the doGet method in Toyservlet given below?

```
public class ToyServlet extends HttpServlet
{
    public void doGet(HttpServletRequest req, HttpServletResponse res) throws
        ServletException, IOException
    {
        RequestDispatcher rd=getServletContext().getRequestDispatcher("JoyServlet");
        rd.forward(req,res);
    }
}
```

Select two answers from the following.

- a) HTTP 500 error**

- b) NullPointerException
- c) HTTP 404 error
- d) An illegalArgumentException**
- e) HTTP 255 error

77. Consider the following servlet code:

```
public class TestServlet extends HttpServlet
implements SingleThreadModel
{
private static Hashtable staticHash = new StringBuffer();
private Hashtable instanceHash = new StringBuffer();
public void doGet(HttpServletRequest req, HttpServletResponse res)
{
StringBuffer sb = new StringBuffer()
HttpSession session = req.getSession();
ServletContext ctx = getServletContext();
// 1
} }
```

Which of the following lines can be inserted at //1 so that the StringBuffer object referred to by the variable sb can only be accessed from a single thread at a time?

(Select two answers)

- a) staticHash.put("sb", sb)
- b) instanceHash.put("sb", sb)**
- c) session.setAttribute("sb", sb)
- d) ctx.setAttribute("sb", sb)
- e) req.setAttribute("sb", sb)**

78.Consider the following servlet code:

```
public class LogTestServlet extends HttpServlet
{
    public void service(HttpServletRequest req,
        HttpServletResponse res)
        throws ServletException, IOException
    {
        String logMsg = "LogTestServlet.service():Probe message";
        //1
    }
}
```

Which of the following statements can be inserted at //1 so that logMsg may be entered into the servlet log file?

(Select three answers)

a) `log(logMsg);`

b) `req(logMsg);`

c) `getServletConfig().log(logMsg);`

d) `getServletContext().log(logMsg);`

e) `getServletConfig().getServletContext().log(logMsg);`

79.Which three of the following codes represent internal dispatch to servlet requests?

a) `<filter-mapping>`

`<filter-name>All Dispatch Filter</filter-name>`

`<servlet-name>*</servlet-name>`

`<dispatcher>FORWARD</dispatcher>`

`</filter-mapping>`

b) `<filter-mapping>`
 `<filter-name>All Dispatch Filter</filter-name>`
 `<servlet-name>*</servlet-name>`
 `<dispatcher>ERROR</dispatcher></filter-mapping>`

c) `<filter-mapping>`
 `<filter-name>All Dispatch Filter</filter-name>`
 `<servlet-name>*</servlet-name>`
 `<dispatcher>RESPONSE</dispatcher>`
 `</filter-mapping>`

d) `<filter-mapping>`
 `<filter-name>All Dispatch Filter</filter-name>`
 `<servlet-name>*</servlet-name>`
 `<dispatcher>REQUEST</dispatcher>`
 `</filter-mapping>`

e) `<filter-mapping>`
 `<filter-name>All Dispatch Filter</filter-name>`
 `<servlet-name>*</servlet-name>`
 `</filter-mapping>`

80. Which two of the following are names of special attributes associated with the dispatching mechanism?

- a) `java.servlet.include.servlet_name`
- b) `javax.http.servlet.include.query_name`
- c) `javax.servlet.include.servlet_path`
- d) `javax.servlet.forward.request_url`
- e) `javax.servlet.include.path_info`

81. Which two of the following are true statements about sessions?

- a) Sessions can span web applications
- b) Sessions can be cloned across JVMs

c) Sessions are destroyed only after a predefined period of inactivity

d) Sessions can be set to never time out

e) You can use the deployment descriptor to cause sessions to expire after a set number of requests.

82.Which one of the following lines of code, in the doPost() method of a servlet, uses the URL rewriting approach to maintaining sessions?

a) useURLRewriting();

b) out.println(response.rewrite("Click here"));

c) out.println("Click here"));

d) out.println("Click here"));

e) out.println("Click here"));

83.Which three of the following elements are allowed in the <filter-mapping> element of the deployment descriptor?

a) <servlet-name>

b) <filter-class>

c) <dispatcher>

d) <url-pattern>

e) <filter-chain>

84.Rahul is working on a web application. He wants to have a functionality that will enable him to know if the session the user is using is from cookie or from URL .

Which two of the following methods should he use?

a)isRequestedIdFromCookie

b)isRequestedSessionIdFromURL

c)isRequestedId FromURL

d)isRequestedSessionIdFromCookie

e)Requested SessionIdsFromCookie

85.Which two of the following statements are correct?

a) A call to `ServletRequest.setAttribute()` with a new name causes a call to the `attributeAdded()` method on `ServletRequestListener`

b) A call to `ServletRequest.setAttribute()` with a new name causes a call to the `attributeAdded()` method on `ServletRequestAttributeListener`

c) A call to `ServletRequest.setAttribute()` with an existing name causes a call to the `attributeAdded()` method on `ServletRequestAttributeListener`

d) A call to `ServletRequest.setAttribute()` with an existing name causes a call to the `attributeReplaced()` method on `ServletRequestAttributeListener`

e) A call to `ServletRequest.setAttribute()` with an existing name causes a call to the `attributeModified()` method on `ServletRequestAttributeListener`

86.Which two of the following are true regarding the parameters defined using the `<context-param>` element of a deployment descriptor?

a) They are thread safe.

b) They are accessible from multiple threads simultaneously and from any servlet of the web application.

c) They can be modified using the `setAttribute()` method.

- d) They can be modified using the setParameter() method.
- e) They can be modified using the setInitParameter() method.

87. Consider the following code:

```
public class WWServlet extends HttpServlet  
{  
....  
}
```

Which one of the following abstract methods do you need to compulsorily implement so that it compiles without any errors?

- a) service()
- b) init()
- c) doGet
- d) all doXXX methods
- e) No method as HttpServlet has dummy implementations**

88. Which two of the following statements are true?

- a) The sendRedirect method can only accept an absolute URL
- b) The sendRedirect method can only accept a relative URL
- c) The sendRedirect method can accept either an absolute or relative URL**
- d) A redirect cannot be performed after anything has been written to the outputstream**
- e) SendRedirect() is declared in HttpServletRequest interface

89.Which two of the following statements are correct about object implementing HttpSessionBindingListener interface?

- a) valueBound method will be called before the object is accessible through getAttribute method**
- b) valueBound method will be called after the object is accessible through getAttribute method
- c) valueUnbound method will be called before the object is removed from the session
- d) valueUnbound method will be called after the object is removed from the session**
- e) valueBound method will be called before the object is bound to the session.

90.Predict the output of the following servlet code:

```
Line no 1)Import java.io.*;
Line no 2)Import javax.servlet.*;
Line no 3)Import javax.servlet.http.*;
Line no 4)Public class ServletTest extends HttpServlet
Line no 15{
Line no 6)protected void doGet(ServletRequest request,ServletResponse response)throws
ServletException,IOException
Line no 7){
Line no 8)HttpSession ss=request.getSession(false);
Line no 9)ss.invalidate();
Line no 10)ss.setAttribute("illegal","exception thrown");
}
}
```

Select one answer from the following.

- a) Will not compile**
- b) NullPointerException at line 8 on clients first call to servlet

- c) IllegalStateException at line10
- d) None of the listed options

91.Which one of the following interfaces or classes is used to retrieve the session associated with a user?

- a) GenericServlet
- b) ServletConfig
- c) ServletContext
- d) HttpServlet
- e) HttpServletRequest**

92.Which one of the following is a method of the HttpSessionListener interface?

- a) SessionCreated**
- b) AttributeRemoved
- c) ValueBound
- d) SessionDidActivate
- e) SessionInitialized

93.Which one of the following methods will be invoked on a session attribute that implements HttpSessionBindingListener when the session is invalidated?

- a) sessionDestroyed
- b) valueUnbound**
- c) attributeRemoved
- d) sessionInvalidated

e) sessionDeactivated

94.Which one of the following method calls will ensure that a session will never be expunged by the servlet container?

- a) session.setTimeout(0);
- b) session.setTimeout(-1);
- c) session.setTimeout(Integer.MAX_VALUE);
- d) session.setTimeout(Integer.MIN_VALUE);

e) HttpSession.setMaxInactiveInterval(int seconds)

95.Which one of the following statements is true?

- a) A session attribute can store either a class or primitive type
- b) A session attribute is stored with the type Object**
- c) A session attribute can only be a data type that implements the serializable interface
- d) A session attribute is stored with a call to the setSessionAttribute method

96.Servlets that implement the SingleThreadModel cannot share a single HttpSession Object across multiple servlets.

State True or False.

a) TRUE

b) FALSE

97.Which one of the following statements is true about sessions?

- a) Objects can only be stored in sessions if the user has cookies activated
- b) By default, session objects only exist for the scope of a request

- c) Objects created within a session are stored as cookies in the browser
- d) Session variables are stored with the Application type Object
- e) By default request parameters are stored within a session**

98.Which one of the following classes is appropriate for monitoring when users sign into the system and recording it in the log?

- a) ApplicationContextAttributeListener
- b) HttpSessionListener**
- c) HttpSessionActivationListener
- d) HttpLoginListener
- e) ServletContextListener

99.Which one of the following methods would you use to acquire the stream to write binary data in response to a request to from servlet?

- a) getOutputStream() of ServletResponse interface.**
- b) getOutputStream() of HttpServletResponse interface.
- c) getOutputStream() of HttpServletResponse interface
- d) getWriter() of HttpServletResponse interface
- e) getWriter() of ServletResponse interface

**100.Cactus is severside unit testing.
Cactus is serverside functional testing.**

Which one of the following statements is appplicable to the above?

- a) Statement a is true and b is false**

- b) Statement a is false and b is true
- c) Statement a is true and b is true
- d) Statement a is false and b is false

101. Which two of the following statements correctly store an object associated with a name at a place where all the servlets/JSPs of the same webapp participating in a session can use it?

(Assume that request, response, name, value etc. are references to objects of appropriate types.)

- a) request.setAttribute(name, value)
- b) response.setAttribute(name, value)
- c) request.getSession().setAttribute(name, value)**
- d) servlet.getServletContext().setAttribute(name, value)**
- e) request.setParameter(name, value)

102. Which two of the following situations will result in a session getting invalidated?

- a) No request is received from the client for longer than the session timeout period**
- b) The client sends a KILL_SESSION request.
- c) The servlet container decides to invalidate a session due to overload
- d) The servlet explicitly invalidates the session**
- e) A user closes the active browser window

103. Which two of the following statements are true?

- a) The HttpSessionActivationListener is a marker interface and supplies no methods
- b) HttpSessionActivationListener must be configured in the deployment descriptor via the listener tag

c) The HttpSessionActivationListener interface supplies two methods sessionDidActivate and sessionWillPassivate

d) The HttpSessionActivationListener cannot be used to monitor migration of sessions between JVM's

104. Consider the following URL:

http://www.godaddy.com/servlet/HelloWorld;jsessionid=ab123f556

The above is a correct example of _____.

a) use of URL-rewriting for authentication

b) use of URL-rewriting for session tracking

c) use of html hidden parameters for session tracking

d) use of cookie based session tracking.

e) use of HttpSession for session tracking.

105. <web-app>

...

<session-config>

<session-timeout>15</session-timeout>

</session-config>

....

What does the above entry in the Deployment Descriptor cause?

Select one answer from the following.

a) Only allows users to be connected for 15 days total.

b) Sets the session timeout interval to 15 minutes.

- c) Only allows users to be connected for 15 minutes total
- d) Sets the session timeout interval to 15 days.
- e) Sets the session timeout interval to 15 seconds.

106.What can be inferred by the following deployment descriptor?

```
<error-page>  
  <exception-type>java.lang.ArithmeticException</exception-type>  
  <location>/math_error.html</location>  
</error-page>
```

Select one answer from the following.

- a) Route any request to your web application for a page or servlet that cannot be found to math_error.html
- b) Prevents throwing ArithmeticException from math_error.html
- c) Route any ArithmeticException thrown from your servlet to math_error.html**
- d) Route any ServletExceptions with the code 404 thrown from your servlet to math_error.html

107.Which one of the following method calls creates a binary output stream in a servlet?

- a) response.getOutputStream();**
- b) request.getWriter();
- c) request.getOutputStream();
- d) response.getWriter();
- e) Session.getOutputStream();

108. You have two classes named 'MyServletContextAttributesListener' and 'MyHttpSessionListener' which implement interfaces as suggested by their names.

Which one of the following XML fragments, written directly under the <web-app> tag, correctly register these classes so that their instances may receive appropriate notifications?

- a) `<listener>`
 `<listener-class>MyServletContextAttributesListener</listener-class>`
 `<listener-class>MyHttpSessionListener</listener-class>`
 `</listener>`
- b) `<listener-class>MyServletContextAttributesListener</listener-class>`
 `<listener-class>MyHttpSessionListener</listener-class>`
- c) `<listener>`**
 `<listener-class>MyServletContextAttributesListener</listener-class>`
 `</listener>`
 `<listener>`
 `<listener-class>MyHttpSessionListener</listener-class>`
 `</listener>`
- d) `<context-listener>`
 `<listener-class>MyServletContextAttributesListener</listener-class>`
 `</context-listener>`
 `<session-listener>`
 `<listener-class>MyHttpSessionListener</listener-class>`
 `</session-listener>`
- e) `<listener>MyServletContextAttributesListener</listener>`
 `<listener>MyHttpSessionListener</listener>`

109. Identify three techniques from the following that can be used to implement 'sessions' if the client browser does not support cookies.

- a) Using Http headers.
- b) Using https protocol**
- c) Hidden form fields.**

d) URL rewriting

e) It cannot be done without cookie support.

110. Consider the following deployment descriptor snippet:

```
<filter-mapping>  
  <filter-name>Filter1</filter-name>  
  <servlet-name>ServletToFilter</servlet-name>  
</filter-mapping>  
<filter-mapping>  
  <filter-name>Filter2</filter-name>  
  <url-pattern>/*</url-pattern>  
</filter-mapping>
```

Which one of the following is true about the above code?

- a) The filter-mapping tag does not have a servlet-name sub element
- b) Filter1 will be invoked before Filter2 if ServletToFilter is requested

c) Filter2 will be invoked before Filter1 if ServletToFilter is requested

- d) Only Filter1 will be invoked by a valid request to ServletToFilter

111. Which one of the following statements is true?

- a) Once an ServletRequest attribute has been set, it is visible to all subsequent requests
- b) Data in a HttpSession attribute will be available if the web server restarts.

c) Data in the ServletContext can be shared by any servlet of the same web application

- d) The getParameter method of HttpSession will retrieve a session attribute

112. Which two of the following statements are true?

- a) The doFilter method is always invoked by the container, never within a programmers code
- b) A filter can be invoked either through being declared in WEB.XML or explicitly within a programmers code
- c) Filters are associated with a URL via the filter-mapping tag**
- d) Filters can be initialised via the filter-init-param tag in the deployment descriptor
- e) Filters can be initialised via the init-param tag in the deployment descriptor**

113. Which three of the following statements are true?

- a) The getSession method of HttpServletRequest has a return type of HttpSession**
- b) The getSession method of HttpServletResponse has a return type of HttpSession
- c) getSession(false) will return any existing session but not create a new one if none exists**
- d) getMaxInactiveInterval() returns an int value that represents time in seconds**
- e) getMaxInactiveInterval() returns an int value that represents time in milliseconds

114. Which of the following statements are true?(Select three answers)

- a) A session will always be invalidated if a user shuts down their browser
- b) A session will always be invalidated if the servlet container restarts**
- c) A session can be invalidated by calling the invalidate method of the HttpSession class**
- d) A session cannot be invalidated via programmer code.
- e) The session timeout interval can be specified in the deployment descriptor.**

115. Which three of the following are methods of the HttpServlet class used to process HTTP requests?

a) doDelete

b) doRemove

c) doPut

d) doHead

e) doDown

116. Which one of the following statements is true?

a) A request attribute will exist for as long as the web application

b) A session attribute is visible to all clients currently accessing the application

c) ServletContext attributes are visible to all clients currently accessing the application

d) A ServletContext attribute is only visible to the servlet from which it is created

e) The scope of an attribute can be HttpSession, ServletRequest or ServletConfig

117. The following line of code exists in the doGet method of Servlet:

String sid = request.getParameter("jsessionId");

Which three of the following options will retrieve the HttpSession associated with the request? (Assume that the session has already been created.)

a) HttpSession session = request.getSession();

b) HttpSession session = HttpSession.getSession(sid);

c) HttpSession session = request.getSession(sid);

d) HttpSession session = request.getSession(true);

e) HttpSession session = request.getSession(false);

118. Which two of the following classes/interfaces provide methods to write messages to a log file?

a) GenericServlet

b) ServletRequest

c) HttpServletRequest

d) ServletContext

e) Only GenericServlet

119. Which one of the following gives the correct return type for ServletContext.getResource() and ServletContext.getResourceAsStream() methods?

a) java.io.Resource and java.io.InputStream

b) java.io.Resource and java.io.BufferedInputStream

c) java.net.URL and java.io.InputStream

d) java.io.File and java.io.InputStream

e) java.net.URL and java.io.FileInputStream

120. Which one of the following HTTP protocol methods is eligible to produce unintended side effects upon multiple identical invocations beyond those caused by single invocation?

a) GET

b) POST

c) PUT

d) OPTIONS

e) HEAD

121. Which one of the following can be used to explicitly expunge the session object?

a) You cannot. It can only be expunged automatically after session timeout expires.

b) By calling invalidate() on session object.

c) By calling expunge() on session object.

d) By calling delete() on session object.

e) By calling finalize() on session object.

122. Mahesh is a developer developing a web application. He wants his servlets to behave in a single threaded environment.

Which one of the following will be the right choice to achieve the above?

a) The servlet has to implement singleThreadedModel interface

b) The servlet has to extend singleThreadedModel Class

c) The servlet has to extend httpServlet which in turn implements SingleThreadedModel interface

d) It is not possible to make a servlet behave in a single threaded fashion

123. Which three of the following are true about servlet filters?

a) A filter must implement the destroy method

b) A filter must implement the do Filter method

c) A servlet may have multiple filters associated with it

d) A servlet that is to have a filter applied to it must implement the javax.servlet.FilterChain interface

e) A filter that is part of a filter chain passes control to the next filter in the chain by invoking the FilterChain forward method

124. Which one of the following jar files is used in cactus testing to perform tasks such as logging entries and exit of methods, checking configuration, etc.?

- a) Cactus.jar
- b) httpclient.jar
- c) Httpunit.jar
- d) Aspectjrt.jar**
- e) TaspCactus.jar

125. Which one of the following is a valid way to set up a mime mapping in the deployment descriptor?

- a) `<mime-mapping-list>`
 `<mime-type>text/plain</mime-type><extension>txt</extension>`
 `</mime-mapping-list>`
- b) `<mime-mapping-list>`
 `<mime-type>text/plain</mime-type>`
 `</mime-mapping-list>`
- c) `<mime-mapping>`
 `<extension>txt/plain</extension>`
 `</mime-mapping>`
- d) `<mime-mapping>`**
 `<extension>txt</extension>`
 `<mime-type>text/plain</mime-type>`
 `</mime-mapping>`

126. Sachin wants to debug his code while executing the code he has created. Select three methods from the following that he can use to do it.

- a) `System.out.println();`**
- b) Using `jdb(java debugger)tool`**

c) Using javadebugging class

d) Using log() method of ServletContext

e) Using debugger interface methods

127.Which two of the following statements are correct?

a) The getRequestDispatcher(String path) method of ServletRequest interface accepts parameter the path to the resource to be included or forwarded to, which cannot be relative to the request of the calling servlet

b) The getRequestDispatcher(String path) method of ServletContext interface cannot accepts relative paths

c) The getRequestDispatcher(String path) method of ServletRequest interface accepts parameter the path to the resource to be included or forwarded to, which can be relative to the request of the calling servlet

d) The getRequestDispatcher(String path) method of ServletContext interface can accepts relative paths

128.Which two of the following are true about Cookies?

a) Cookies are created in clientside and stored in server side

b) Maximum of twenty cookies per website can be stored in a client machine

c) Minimum size of a cookie is 4kb

d) Cookies can be created by using Cookie class

129. Which two of the following attributes are thread safe?

- a) Context attributes
- b) Session attributes
- c) Static variables in servlets
- d) Instance variables**
- e) Local variables**

130. Which two of the following are of the correct syntax for sendError() of HttpServletResponse interface?

- a) void sendError(int)**
- b) void sendError(int,int)
- c) void sendError(int,String)**
- d) void sendError(String,String)
- e) void sendError(String)

131. Which two of the following statements are true?

- a) sendError triggers the container to generate an error page**
- b) setError method does not trigger the container to generate an error page
- c) setStatus method triggers the container to generate an error page
- d) setStatus method just sends the status code to the browser and browser displays it according to the browser settings.**

132.Which three of the following statements are true?

a) To use a filter it must be declared in the deployment descriptor

b) Filters perform filtering in the doFilter method

c) Filters perform filtering in the filter method

d) Every Filter has access to a FilterConfig object from which it can obtain its initialization parameter

e) Every filter must have a service method

133.Which one of the following sets of tags will declare a filter and map it to a URL?

a) `<filter>`
 `<filter-name>Filter2</filter-name>`
 `<filter-class>com.examulator.Filter</filter-class>`
 `</filter>`
 `<filter-mapping>`
 `<filter-name>Filter2</filter-name>`
 `<url-pattern>/*</url-pattern>`
 `</filter-mapping>`

b) `<filter>`
 `<filter-name>Filter2</filter-name>`
 `<filter-class>com.examulator.Filter</filter-class>`

 `<filter-mapping>`
 `<filter-name>Filter2</filter-name>`
 `<url-pattern>/*</url-pattern>`
 `</filter-mapping>`
 `</filter>`

- c) `<filter>`
 `<name>Filter2</name>`
 `<class>com.examulator.Filter</class>`
 `</filter><filter-mapping>`
 `<name>Filter2</name>`
 `<url>/*</url>`
 `</filter-mapping>`
- d) `<filter>`
 `<name>Filter2</name>`
 `<class>com.examulator.Filter</class>`
 `</filter>`
 `<filter-map>`
 `<name>Filter2</name>`
 `<url>/*</url>`
 `</filter-map>`

134. Which two of the following statements are NOT TRUE?

- a) `HttpServletResponseWrapper` takes a constructor parameter of type `HttpServletResponse`
- b) Filters are called in the order they appear in the deployment descriptor.

c) Methods of the wrapper classes must not be overridden.

- d) Filters are an example of the Intercepting Filter design pattern

e) Filters can only be invoked on incoming requests, and not on a dispatcher forward or include.

135. Which one of the given options can be used in a servlet code that needs to access a binary file kept in `WEB-INF/data.zip` while servicing a request?

(Assume that `config` refers to the `ServletConfig` object of the servlet and `context` refers to the `ServletContext` object of the servlet.)

- a) `InputStream is = config.getInputStream("/WEB-INF/data.zip");`
- b) `InputStream is = context.getInputStream("data.zip");`
- c) `InputStream is = context.getResourceAsStream("/WEB-INF/data.zip");`**
- d) `InputStream is = context.getResourceAsStream("WEB-INF/data.zip");`
- e) `InputStream is = config.getResourceAsStream("WEB-INF/data.zip");`

136. Consider the code given below:

```
public class MyHSAListener implements HttpSessionAttributeListener  
{  
    public void attributeAdded(HttpSessionBindingEvent e){ }  
    public void attributeRemoved(HttpSessionBindingEvent e){ }  
}
```

Which one of the following statements is correct with respect to the above code?

- a) `public void attributeReplaced(...){ }` must be added.**
- b) `public void attributeChanged(...){ }` must be added
- c) The parameter class should be `HttpSessionEvent`
- d) The parameter class should be `HttpSessionAttributeEvent`
- e) It will compile as it is.

137. Which one of the following elements of web.xml affect the whole web application instead of a specific servlet?

- a) `content-type`
- b) `init-param`

c) listener

d) application

e) app-config

138. Given a servlet with the following method signature:

```
protected void doGet(HttpServletRequest request, HttpServletResponse response) throws  
ServletException, IOException {  
    ServletContext ctx = getServletContext();  
    //comment  
}
```

Which of the following if placed on the line after //comment will be valid to perform a browser redirect?

(Select two answers)

a) ctx.sendRedirect("/login.jsp");

b) response.sendRedirect("/login.jsp");

c) response.sendRedirect("login.jsp");

d) request.redirect("login.jsp");

e) request.sendRedirect("login.jsp");

**139. A resource that is included using the RequestDispatcher.include method will share attributes of the originating resource.
State true or false.**

a) TRUE

b) FALSE

140. Which two of the following statements are true?

- a) The HttpSessionBinding listener provides valueBound and valueUnbound methods
- b) The HttpSessionBinding listener provides attributeBound and attributeUnbound methods
- c) The HttpSessionBindingListener does not need to be configured in the deployment descriptor
- d) HttpSessionAttributeListener is a marker interface and provides no methods